

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: EISA EZHLO Examiner #: 78424 Date: 8/14/03
 Art Unit: 1751 Phone Number 30 5-0217 Serial Number: 10052296
 Mail Box and Bldg/Room Location: CP3/9034 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Compounds for oxidative coloration of hair
 Inventors (please provide full names): Mu-Hui Lin et al.

Earliest Priority Filing Date: 1/23/2001

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

please do search on the formula (1)

*Thank you
 Examiner White
 8/14/03*

STAFF USE ONLY

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher: <u>K. Fuller</u>	NA Sequence (#) _____	STN <u>✓</u>	
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____	
Searcher Location: _____	Structure (#) <u>1</u>	Questel/Orbit _____	
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____	
Date Completed: <u>8/14/03</u>	Litigation _____	Lexis/Nexis _____	
Searcher Prep & Review Time: <u>20</u>	Fulltext _____	Sequence Systems _____	
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____	
Online Time: <u>20</u>	Other _____	Other (specify) _____	

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=> FILE REG

FILE 'REGISTRY' ENTERED AT 14:23:25 ON 14 AUG 2003
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STRUCTURE FILE UPDATES: 13 AUG 2003 HIGHEST RN 566135-25-9
DICTIONARY FILE UPDATES: 13 AUG 2003 HIGHEST RN 566135-25-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> FILE HCAPLUS

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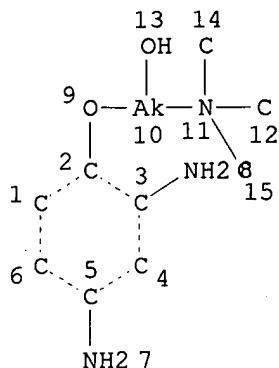
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FILE COVERS 1907 - 14 Aug 2003 VOL 139 ISS 7
FILE LAST UPDATED: 13 Aug 2003 (20030813/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> D QUE

L4 STR



16 structures from this query

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L6 16 SEA FILE=REGISTRY SSS FUL L4

L7 2 SEA FILE=HCAPLUS ABB=ON L6

L8 2 SEA FILE=HCAPLUS ABB=ON L7 AND (HAIR OR KERAT?)

=> D L8 ALL HITSTR 1-2

2 CA references

L8 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2002:574892 HCAPLUS

DN 137:129544

TI Couplers for oxidative coloration of **hair**

IN Lim, Mu-Ill; Pan, Yuh-Guo; Anderson, James S.

PA Clairol Incorporated, USA

SO PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-13

CC 62-3 (Essential Oils and Cosmetics)

FAN.CNT 1

applicant

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002058659	A1	20020801	WO 2002-US1636	20020118
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,				
	RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,				
	VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,				
	CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,				
	BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2002144700	A1	20021010	US 2002-52296	20020118

PRAI US 2001-263551P P 20010123

OS MARPAT 137:129544

AB Couplers for **hair** coloring compns. for oxidative dyeing of **hair** are [3-(2,4-diaminophenoxy)-2-hydroxypropyl]trialkylammonium halides or sulfates. For example, a **hair** dye was formulated contg. [3-(2,4-diaminophenoxy)-2-hydroxypropyl]trimethylammonium bromide, p-toluenediamine (as primary dye intermediate), and conventional **hair** prepn. ingredients.

ST **hair** dye coupler quaternary ammonium compd

IT **Hair** preparations

(dyes; **hair** dyes contg. couplers and oxidn. dye primary intermediates)

IT 90-15-3, Naphthalen-1-ol 95-55-6, 2-Aminophenol 95-70-5, 2-Methylbenzene-1,4-diamine 95-88-5, 4-Chlorobenzene-1,3-diol 106-50-3, Benzene-1,4-diamine, biological studies 108-46-3, Benzene-1,3-diol, biological studies 123-30-8, 4-Aminophenol 150-75-4, 4-Methylaminophenol 591-27-5, 3-Aminophenol 608-25-3, 2-Methylbenzene-1,3-diol 1004-74-6, Pyrimidinetetramine 2380-86-1, 1H-Indol-6-ol 2835-95-2, 5-Amino-2-methylphenol 2835-98-5, 2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-methylphenol 7469-77-4, 2-Methyl-naphthalen-1-ol 7575-35-1 16867-03-1, 2-Aminopyridin-3-ol 17672-22-9, 2-Amino-6-methylphenol 26021-57-8, 3,4-Dihydro-2H-1,4-benzoxazin-6-ol 41927-22-4, 4-Methyl-2-phenyl-2,4-dihydro-3H-pyrazol3-one 53222-92-7, 3-Amino-2-methylphenol 55302-96-0, 5-(2-Hydroxyethylamino)2-methylphenol 70643-19-5, 2-(2,4-Diaminophenoxy)ethanol 83763-47-7 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 94082-77-6 129697-50-3 131311-66-5 155601-17-5 157469-54-0 220264-60-8 307493-94-3, 3-(2,4-Diaminophenoxy)propan-1-ol 329320-36-7

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(**hair** dyes contg. couplers and oxidn. dye primary intermediates)

IT 444155-06-0 444155-07-1 444155-09-3

444155-10-6 444155-12-8 444155-13-9

444155-14-0 444155-15-1 444155-16-2

444155-18-4 444155-20-8

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(novel couplers for oxidative **hair** dyes)

IT 19652-60-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of **hair** dye couplers)

IT 51-28-5, 2,4-Dinitrophenol, reactions 535-80-8, m-Chlorobenzoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of **hair** dye couplers)

IT 10242-18-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of **hair** dye couplers)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Bugaut; DE 3302534 A1 1983 HCAPLUS

(2) Rose; DE 2948093 A1 1981 HCAPLUS

IT 444155-06-0 444155-07-1 444155-09-3

444155-10-6 444155-12-8 444155-13-9

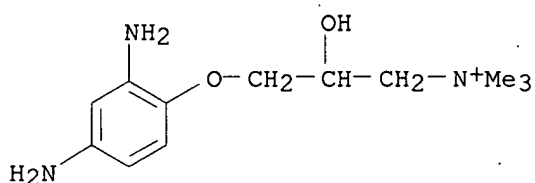
444155-14-0 444155-15-1 444155-16-2

444155-18-4 444155-20-8

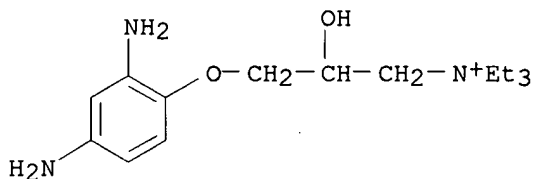
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(novel couplers for oxidative hair dyes)

RN 444155-06-0 HCAPLUS

CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N,N-trimethyl-,
bromide (9CI) (CA INDEX NAME)● Br⁻

RN 444155-07-1 HCAPLUS

CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-N,N,N-triethyl-2-hydroxy-,
chloride (9CI) (CA INDEX NAME)● Cl⁻

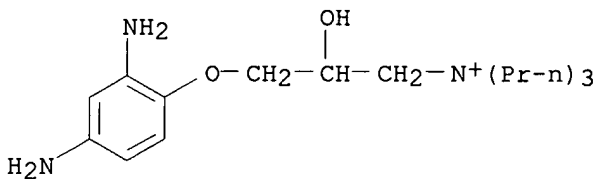
RN 444155-09-3 HCAPLUS

CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N,N-tripropyl-, propyl
sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 444155-08-2

CMF C18 H34 N3 O2

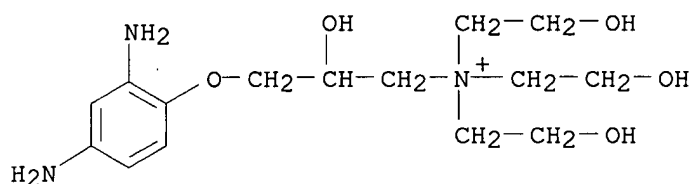


CM 2

CRN 72640-73-4
CMF C3 H7 O4 S

n-Pr-O-SO₃⁻

RN 444155-10-6 HCAPLUS
CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N,N-tris(2-hydroxyethyl)-, bromide (9CI) (CA INDEX NAME)

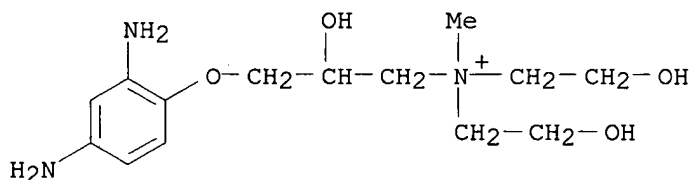


● Br⁻

RN 444155-12-8 HCAPLUS
CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 444155-11-7
CMF C14 H26 N3 O4

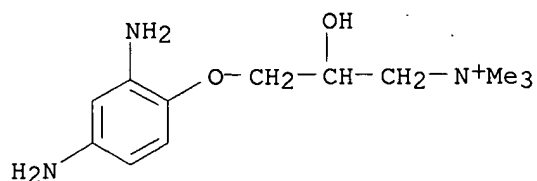


CM 2

CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

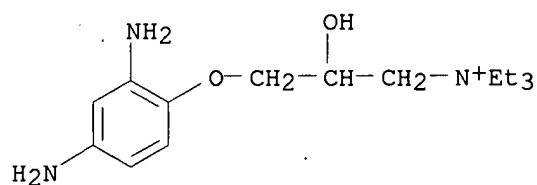
RN 444155-13-9 HCAPLUS
CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N,N-trimethyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 444155-14-0 HCAPLUS

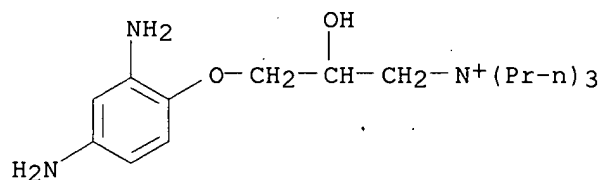
CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-N,N,N-triethyl-2-hydroxy-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 444155-15-1 HCAPLUS

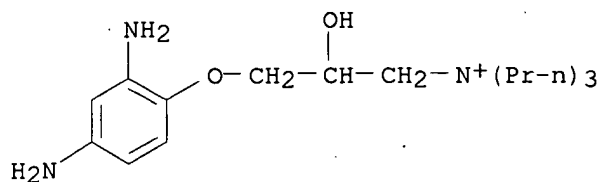
CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N,N-tripropyl-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 444155-16-2 HCAPLUS

CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N,N-tripropyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

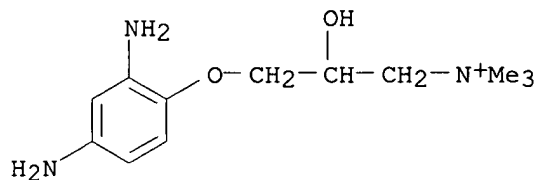
RN 444155-18-4 HCAPLUS

CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N,N-trimethyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 444155-17-3

CMF C12 H22 N3 O2



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

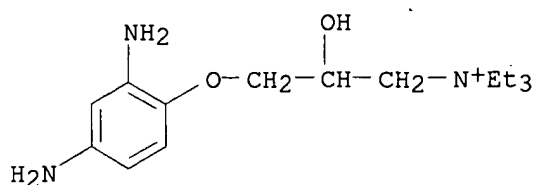
RN 444155-20-8 HCAPLUS

CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-N,N,N-triethyl-2-hydroxy-, ethyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 444155-19-5

CMF C15 H28 N3 O2



CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

L8 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1983:577512 HCAPLUS

DN 99:177512

TI Amino compounds useful as **hair** dyes

IN Bugaut, Andree; Genet, Alain

PA Oreal S. A. , Fr.

SO Ger. Offen., 93 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C07C093-14; A61K007-13

CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 62

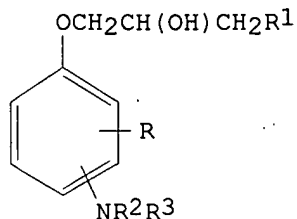
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3302534	A1	19830804	DE 1983-3302534	19830126
	CH 661501	A	19870731	CH 1983-273	19830118
	FR 2520358	A1	19830729	FR 1983-847	19830120
	FR 2520358	B1	19850524		
	CA 1191849	A1	19850813	CA 1983-420080	19830124
	AT 8300220	A	19880515	AT 1983-220	19830124
	AT 387212	B	19881227		
	BE 895697	A1	19830725	BE 1983-209961	19830125
	AU 8310762	A1	19830804	AU 1983-10762	19830125
	AU 556627	B2	19861113		
	GB 2113685	A1	19830810	GB 1983-1981	19830125
	GB 2113685	B2	19851211		
	NL 8300267	A	19830816	NL 1983-267	19830125
	ES 519237	A1	19840716	ES 1983-519237	19830125
	JP 58164553	A2	19830929	JP 1983-10007	19830126
	GB 2129022	A1	19840510	GB 1983-31092	19831122
	GB 2129022	B2	19851211		
	US 4888025	A	19891219	US 1985-742240	19850607
	AU 8666832	A1	19870416	AU 1986-66832	19861222
PRAI	LU 1982-83900		19820126		
	LU 1982-84391		19820927		

US 1983-459964
GB 1983-1981

19830121
19830125

GI



AB 3-Amino-1-(substituted phenoxy)-2-propanols (I; R = NO₂, NH₂; R₁ = NH₂, C1-4 alkyl- or hydroxyalkyl-substituted amino, morpholino, piperidino, quaternary ammonium; R₂, R₃ = H, C1-4 alkyl or hydroxyalkyl) are prepd. and used in **hair** dyeing formulations. Depending on the nature of R and its position with respect to NR₂R₃, I can be used as direct dyes (R = NO₂) or (R = NH₂) as oxidn. bases or couplers. Thus, reaction of 4,3-AcNH(O₂N)C₆H₃OH [7403-75-0] with epichlorohydrin to form the glycidyl ether (II) [24544-37-4], treatment of II with Et₂NH to give 4,3-AcNH(O₂N)C₆H₃OCH₂CH(OH)CH₂NEt₂ (III) [87563-65-3], and deacetylation of III gave 4,3-H₂N(O₂N)C₆H₃OCH₂CH(OH)CH₂NEt₂.HCl [87563-64-2], a direct dye. Hydrogenation of 2,4-H₂N(O₂N)C₆H₃OCH₂CH(OH)CH₂NMe₂ [87563-66-4], followed by N-acetylation, quaternization with MeI, and deacetylation gave 2,4-(H₂N)C₆H₃OCH₂CH(OH)CH₂N+Me₃Cl-.2HCl [87570-61-4], a coupler for oxidative dyeing compns. Nine other I were prepd. by these and similar methods, and dyeing formulations contg. these dyes are described in detail.

ST aminophenoxypropanol **hair** dye; phenylenediamine deriv
hair dye; nitroaminophenol ether **hair** dye; coupler
oxidative **hair** dye; oxidn base **hair** dye

IT Alcohols, uses and miscellaneous
RL: USES (Uses)

(amino, for direct and oxidative **hair** dyes)

IT **Hair** preparations

(dyes, direct, aminophenoxypropanol derivs. as)

IT **Hair** preparations

(dyes, oxidative, aminophenoxypropanol derivs. as bases and couplers for)

IT 80062-31-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(epoxidn. of, by cyclodehydration)

IT 97-60-9 7403-75-0 25351-89-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(etherification of, by epichlorohydrin)

IT 87563-58-4

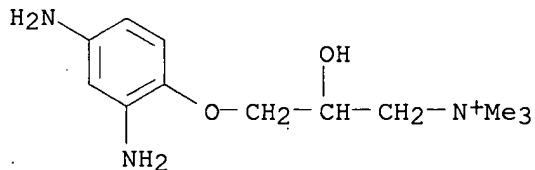
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrogenation of)

IT 87563-48-2P 87563-50-6P **87570-61-4P**

RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. and use of, as coupler for oxidative **hair** dyeing compns.)

IT 87563-42-6P 87563-43-7P 87563-44-8P 87563-45-9P 87563-46-0P
87563-49-3P 87563-64-2P

- RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. and use of, as direct dye for **hair**)
- IT 87563-47-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. and use of, as oxidn. base for **hair** dyeing compns.)
- IT 87563-51-7P 87563-52-8P 87563-56-2P 87563-61-9P 87563-63-1P
87563-65-3P 87570-60-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and deacetylation of)
- IT 87563-66-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and hydrogenation of)
- IT 87563-53-9P 87563-55-1P 87563-60-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and hydrolysis of)
- IT 87563-62-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and quaternization of)
- IT 24544-37-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction of, with amines)
- IT 78917-60-9P 87563-54-0P 87563-59-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction of, with succinimide)
- IT 87563-57-3P
RL: IMF (Industrial manufacture); PREP (Preparation)
-
- IT **87570-61-4P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. and use of, as coupler for oxidative **hair** dyeing
compns.)
- RN 87570-61-4 HCAPLUS
- CN 1-Propanaminium, 3-(2,4-diaminophenoxy)-2-hydroxy-N,N,N-trimethyl-,
chloride, dihydrochloride (9CI) (CA INDEX NAME)



● Cl⁻

2 HCl

